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IS 11009 (1984): Specification for Chlorofenvinphos Granules [FAD 1: Pesticides and Pesticides Residue Analysis]



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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR
CHLORFENVINPHOS GRANULES

UDC 632.951 CHLOR



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR CHLORFENVINPHOS GRANULES

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Indian Standard

SPECIFICATION FOR CHLORFENVINPHOS GRANULES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 August 1984, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 Chlorfenvinphos granules are generally manufactured to contain 10 percent (*m/m*) of chlorfenvinphos.

0.3 In the preparation of this standard due consideration has been given to the provisions of the *Insecticides Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for chlorfenvinphos granules.

2. REQUIREMENTS

2.1 Constituents — The material shall consist of chlorfenvinphos technical as the only active ingredient impregnated on suitable blank granules as carrier(s) together with binder(s), stabiliser(s) and/or other formulants.

2.1.1 Chlorfenvinphos, technical employed in the formulation of this material shall conform to IS : 10268-1982†.

* Rules for rounding off numerical values (*revised*).

† Specification for chlorfenvinphos, technical.

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2.1.2 Blank granules used in the formulation of this material shall conform to IS :9666-1980*.

2.2 Physical — The material shall comply with the physical requirements specified in **2.2.1** to 2.2.5.

2.2.1 Description — The product shall consist of dry, free flowing granules, free from visible extraneous matter and dust except for the amount specified (see 2.2.3). It may contain added colouring matter.

2.2.2 Sieving Requirements — Not less than 97 percent by mass of the product shall pass through a test sieve having a mesh size of the upper declared limit and not more than 5 percent by mass of the product shall pass through a test sieve having a mesh size of the lower declared limit when determined by the method prescribed in 12.1 of IS : 6940-1982† [see 3.2 (a)].

2.2.2.1 The ratio of lower to upper limit of the sieve sizes declared under 2.2.2 shall not exceed 1 : 3.

2.2.3 When determined by the method prescribed in 12.1 of IS :6940-1982* not more than 1.0 percent by mass of the product shall pass through 75 micron IS Sieve [see IS : 460 (Part I)-1978‡]. The material retained on the sieve shall comply with the requirements of **2.3.1**.

2.2.4 Storage Stability

2.2.4.1 Heat stability — After storage at $54^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 24 hours, the product shall continue to comply with the requirements of **2.2.1** to **2.2.3**, **2.3.1** and 2.3.2.

2.2.5 Moisture Content — When determined by the method prescribed in 4 of IS :6940-1982†, the moisture content of the material shall not exceed 4.0 percent.

2.3 Chemical — The material shall comply with the chemical requirement specified in 2.3.1 and 2.3.2.

2.3.1 Chlorfenvinphos Content — When determined by the method prescribed in Appendix A of IS : 10268-1982§, the observed chlorfenvinphos content, percent (*m/m*), of any of the samples shall not differ from

* Specification for blank granules.

† Methods of test for pesticides and their formulations (first **revision**).

‡ Specification for test sieves: Part I Wire cloth test sieves (second revision).

§ Specification for chlorfenvinphos, technical.

the nominal value by more than the percent tolerance applied to the declared nominal value as given below:

Nominal Value, Percent	Tolerance, Percent	
Up to 9	+ 10 - 5	} of the nominal value
Above 9 and below 50	± 5	
50 and above	+ 5 - 3	

2.3.1.1 The actual value of the chlorfenvinphos content in the formulation shall be calculated to the second decimal place for rounding off to the first decimal place before applying the tolerances given in 2.3.1.

2.3.1.2 The average content of all samples taken shall not be less than the declared nominal content.

2.3.2 *Acidity* — When tested by the method prescribed in 11.3 of IS : 6940-1982*, the acidity (as H_2SO_4), of the material shall not be more than 0.5 percent by mass.

3. PACKING AND MARKING

3.1 Packing — The material shall be packed in clean and dry containers made of tinplate or mild steel or composite containers suitably and properly lacquered or lined with HDPE liner of thickness not less than 0.062 mm or HDPE container.

Material up to 5 kg can also be packed in polyethylene of thickness not less than 0.062 mm. These packs shall be further packed in suitable individual carton made of cardboard. These individual cartons shall be further packed in corrugated cardboard boxes [see IS : 2771 (Part 1)-1977†] when require transportation. The containers shall also comply with general requirements given in 2 of IS : 8190 (Part 1)-1980‡.

3.2 Marking — The containers shall bear legibly and indelibly the following information and any other information as is necessary under the *Insecticides Act* and Rules.

- Name of the material, particle size, range and ratio (see 2.2.2);
- Type of blank granules used (see 2.1.2);
- Name of the manufacturer;
- Date of manufacture;
- Batch number;

* Methods of test for pesticides and their formulations (*first revision*).

† Specification for fibreboard boxes: Part 1 Corrugated fibreboard boxes (*first revision*).

‡ Requirements for packing of pesticides: Part 1 Solid pesticides (*first revision*).

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- f) Net mass of contents;
- g) Nominal chlorfenvinphos content, percent (m/m); and
- h) The cautionary notice worded as in the *Insecticides Act* and Rules.

3.2.1 The containers may also be marked with the **ISI** Certification Mark.

NOTE—The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer, ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors may be obtained from the Indian Standards Institution.

4. **SAMPLING**

4.1 Representative samples of the material shall be drawn as prescribed in IS :10627-1983*.

5. **TESTS**

5.1 Tests shall be carried out by the appropriate methods referred to in 2.2.2 to 2.2.5, 2.3.1 and 2.3.2.

5.2 Quality of **Reagents** — Unless specified otherwise, pure chemicals and distilled water (see IS :1070-1977†) shall be employed in tests.

NOTE — ‘ Pure chemicals ’ shall mean chemicals that do not contain impurities which affect the results of analysis.

* Methods for sampling of pesticidal formulations.

† Specification for water for general laboratory use (*second revision*).

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INTERNATIONAL SYSTEM OF **UNITS (SI UNITS)**

Base Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Length	metre	<i>m</i>
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

<i>Quantity</i>	<i>Unit</i>	<i>Symbol</i>	<i>Definition</i>
Force	newton	<i>N</i>	$1\ N = 1\ \text{kg.m/s}^2$
Energy	joule	J	$1\ J = 1\ \text{N.m}$
Power	watt	W	$1\ W = 1\ \text{J/s}$
Flux	weber	Wb	$1\ \text{Wb} = 1\ \text{V.s}$
Flux density	tesla	T	$1\ T = 1\ \text{Wb/m}^2$
Frequency	hertz	Hz	$1\ \text{Hz} = 1\ \text{c/s (s-1)}$
Electric conductance	siemens	S	$1\ S = 1\ \text{A/V}$
Electromotive force	volt	V	$1\ V = 1\ \text{W / A}$
Pressure, stress	pascal	Pa	$1\ \text{Pa} = 1\ \text{N/m}^2$

AMENDMENT NO. 1 JANUARY 1989
TO
IS : 11009 - 1984 SPECIFICATION FOR
CHLORFENVINPHOS GRANULES

(Page 4, *clause 2.3.1*) — Substitute the following for the existing clause:

‘2.3.1 *Chlorfenvinphos Content* — When determined by the method prescribed in Appendix A of IS : 10268-1982 and 5.1.1, the observed chlorfenvinphos content, percent (*m/m*), of any of the samples shall not differ from the nominal value, by more than the percent tolerance applied to the declared nominal value as given below:

<i>Nominal Value, Percent</i>	<i>Tolerance, Percent</i>	
up to 9	+ 10 - 5	} of the nominal value
Above 9 and below 50	± 5	
50 and above	+ 5 - 3	

(Page 6, *clause 5.1*) — Insert the following after 5.1 :

‘5.1.1 Weigh accurately the sample containing equivalent to 0.5 g of chlorfenvinphos in a 100-ml stoppered conical flask. Swirl the flask occasionally and keep the solution standing for 30 minutes. Using the clear supernatant liquid, proceed in accordance with the method prescribed in Appendix A of IS : 10268.1982.’

(AFCDC 6)

AMENDMENT NO. 2 JULY 1994
TO
IS 11009 : 1984 SPECIFICATION FOR
CHLORFENVINPHOS GRANULAS

(Page 4, clause 24.4 and 2.2.4.1) — Delete.

(Page 6, clause 4.1) — Substitute the following for the existing:

‘When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be **done as** prescribed in IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 2.3.1 of the standard.’